

subject
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the deposition of the thermal transducer is performed onto the surface of a wafer prior to slicing a plurality of glide heads from the wafer.

subject
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18. (Amended) [The method of claim 16] A method of producing a glide head, the method comprising depositing a generally planar thermal transducer oriented along an air bearing surface of the glide head, wherein the deposition of the thermal transducer is performed onto the air bearing surface after the glide head is sliced from a wafer.

subject
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Please add the following new claims.)

21. The method of claim 18 wherein the air bearing surface is contoured prior to the deposition of the thermal transducer.

22. The method of claim 18 wherein the deposition is performed using a thin film deposition technique.

REMARKS

Claims 2-16 and 18-22 remain for consideration. Claims 17-20 were previously found allowable over the prior art of record. Claim 16 was amended to include features of claim 17. In view of the amendment to claim 16, claim 17 was canceled. Claim 18 was rewritten to be in independent form. Claims 21-22 are identical to claims 19 and 20 except that they depend from claim 18 rather than claim 16.

In addition, claim 2 was amended to more particularly point out Applicants' invention following a phone interview with the Examiner. The amendment of claim 2 is supported by the specification, for example, at page 4, lines 9-12 and from page 5, line 1 to page 6, line 27. No new matter is introduced by the amendments.

Applicants thank the Examiner for the courtesy extended in a phone interview with their undersigned representative on July 13, 2000. During the phone interview the primary and secondary references were discussed in detail. The Examiner suggested an amendment that would clarify that the transducer is not oriented

along the trailing edge of the slider. Applicants indicated that they would likely amend claims 17 and 18 to be in independent form.

Rejection of Claims 2-11 and 13-16

The Examiner rejected claims 2-11 and 13-16 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent 5,808,184 to Boutaghout et al. (the Boutaghout patent) in view of U.S. Patent 5,689,064 to Kennedy et al. (the Kennedy patent). Applicants have amended claim 16 to incorporate the features of claim 17, which had been found free of the prior art. Claim 2 was amended to more particularly point out Applicants' claimed invention. Applicants respectfully request reconsideration of the rejection of claims 2-11 and 13-16 based on the following comments.

The Boutaghout patent describes the use of asperity sensors, such as a magnetoresistive element, oriented along trailing edge 16. As described in the Boutaghout patent, trailing edge 16 and air bearing surface 14 are distinct structures. See, for example, column 3, lines 13-18. With this orientation of the asperity sensors, their lower edges are only located at the air bearing surface. The asperity sensors are placed along the trailing edge of the slider using standard fabrication techniques. See column 3, lines 21-23 of the Boutaghout patent. Because of this orientation of the sensors in the Boutaghout structure, they are able to connect the transducer with drive circuitry 25 at the trailing edge 16, as shown in Fig. 1 of the Boutaghout patent and described at column 3, lines 37-39.

As described in the Kennedy patent, the asperity sensor/transducer is placed on the slider surface opposite the air bearing surface. The Kennedy patent is specific with respect to the description of piezoelectric transducers that measure vibrations in the head following contact with an asperity. In contrast with thermal transducers, piezoelectric transducers sense vibrations within the head regardless of the precise point of contact between

the head and the asperity. Thus, it is convenient to place a piezoelectric transducer on the top surface of the slider.

Differences between structures similar to those in the Boutaghou patent and the new structures described and claimed by Applicants is presented in Applicants' specification from page 5, line 1 to page 6, line 17. Significant advantages are possible with the structures described in Applicants' specification. The Boutaghou patent and Kennedy patent do not teach or suggest a transducer contacting the air bearing surface that is not oriented along the trailing edge. Therefore, the combined disclosures of the Boutaghou patent and the Kennedy patent do not render amended claim 2 obvious. Claims 2-11 and 13-15 depend from claim 2.

In addition, Applicants note that under recent changes to the 35 U.S.C. §103, the Boutaghou reference is not proper prior art under §103. In particular, since the Boutaghou reference is only potential prior art under 35 U.S.C. §102(a) or §102(e), the patent is excluded as prior art under §103(c) since the patent and the present application were both obligated to assignment to Seagate Technology at the time of invention.

Applicants respectfully request withdrawal of the rejection of claims 2-11 and 13-16 under 35 U.S.C. §103(a) as being unpatentable over the Boutaghou patent in view of the Kennedy patent.

Rejection of Claim 12

The Examiner rejected claim 12 under 35 U.S.C. §103(a) as being unpatentable over the Boutaghou patent and the Kennedy patent as applied to claims 2-12 and 13-16, and further in view of U.S. Patent 5,423,207 to Flechsig et al. (the Flechsig patent). The Examiner cited the Flechsig patent for disclosing the grounding of an asperity transducer. Applicants respectfully request reconsideration of the rejection of claim 12 based on the following comments.

As discussed above, the Boutaghou patent and Kennedy patent do not teach or suggest an asperity transducer contacting the air

bearing surface that is not oriented along the trailing edge. Like the Kennedy patent, the Flechsig patent discloses a PZT sensor mounted on the top surface opposite the air bearing surface. See Figs. 8A and 8B. The air bearing surface is contoured for placement at the interface between the rotating disc and the slider. The Flechsig patent does not disclose a sensor/transducer oriented along the air bearing surface or contacting the air bearing surface. Since none of the patents teach or suggest the claimed orientation of the sensor/transducer, the combined disclosures of the Boutaghou patent, the Kennedy patent and the Flechsig patent do not render claim 12 obvious. Applicants respectfully request withdrawal of the rejection of claim 12 under 35 U.S.C. §103(a) as being unpatentable over the Boutaghou patent and the Kennedy patent as applied to claims 2-12 and 13-16, and further in view of the Flechsig patent.

CONCLUSIONS

In view of the above amendments and remarks, Applicant submits that this application is in condition for allowance, and such action is respectfully requested. The Examiner is invited to telephone the undersigned attorney to discuss any questions or comments that the Examiner may have.

The Director of the Patent and Trademark Office is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

WESTMAN, CHAMPLIN & KELLY, P.A.

By: Peter S. Dardi
Peter S. Dardi, Ph.D., Reg. No. 39,650
Suite 1600 - International Centre
900 Second Avenue South
Minneapolis, Minnesota 55402-3319
Phone: (612) 334-3222 Fax: (612) 339-3312